

Title (en)

A SINGLE PIECE TAPE REEL AND ASSEMBLY

Publication

**EP 0236010 A3 19890823 (EN)**

Application

**EP 87301396 A 19870218**

Priority

US 83292786 A 19860224

Abstract (en)

[origin: EP0236010A2] A single piece tape reel and assembly which combines a hub portion (20), a bottom flange (24) and a top bearing cover (28) into a one-piece member of substantially improved rotational stability. Apertures (32) are formed in the top cover in alignment with splines (34) on the hub.

IPC 1-7

**G11B 23/037**; **G11B 23/087**

IPC 8 full level

**G11B 23/037** (2006.01); **G11B 23/087** (2006.01)

CPC (source: EP KR US)

**G11B 23/02** (2013.01 - KR); **G11B 23/037** (2013.01 - EP US); **G11B 23/08728** (2013.01 - EP US)

Citation (search report)

- [A] FR 2445583 A1 19800725 - NIFCO INC [JP]
- [A] GB 2017634 A 19791010 - DAI ICHI SEIKO CO LTD
- [A] EP 0140636 A1 19850508 - MINNESOTA MINING & MFG [US]
- [A] US 4473194 A 19840925 - KASHIMURA NORITAKE [JP]
- [A] GB 2040878 A 19800903 - NIFCO INC
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Cited by

EP0270375A3; EP0349822A3; EP0793845A4; EP0357259A3; US5174520A

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0236010 A2 19870909**; **EP 0236010 A3 19890823**; **EP 0236010 B1 19910313**; CN 1006026 B 19891206; CN 87100968 A 19870902; DE 3768532 D1 19910418; JP H0782731 B2 19950906; JP S62234284 A 19871014; KR 870008298 A 19870925; KR 970011230 B1 19970708; MX 164138 B 19920720; US 4715558 A 19871229

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**EP 87301396 A 19870218**; CN 87100968 A 19870224; DE 3768532 T 19870218; JP 3685287 A 19870219; KR 870001506 A 19870223; MX 527387 A 19870218; US 83292786 A 19860224